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LITERATURE ON THE VEGETATION OF ARKANSAS

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A logical first step in making a study of vegetation of any area is to determine the extent and nature of previous work. The purpose of this paper is to bring together a list of publications on the natural vegetation of Arkansas.

The compilation of such a bibliography involves difficult decisions as to what should be included or omitted. In view of this consideration, the list is restricted to published and unpublished material on or directly related to native vegetation. Articles primarily concerned with forestry, agronomy, range management, horticulture or other applied sciences are not listed unless information on native plants likely to be of value to plant ecologists and taxonomists is given. Other studies not listed are those concerned primarily with plant groups lower than the Bryophyta and papers in the field of taxonomy in which the only information on plants of Arkansas is given as citations of herbarium specimens collected in the state. Master's theses on which a published paper is based, and older articles that have been superseded by later papers are also omitted.

The list includes very few papers published before 1925. A bibliography of published papers previous to this date is included in an article by Buchholz and Palmer (1926). The few older articles here included did not appear in their list, or are of particular significance. Also omitted are results of published or unpublished investigations not available through the University of Arkansas library.

This list comprises 102 references arranged alphabetically by author. A comment on the content of each paper accompanies each reference with the exception of papers on which an explanatory note is deemed unnecessary. Each title is followed by the location applicable to the reference, indicated in parentheses. Names of the county or counties are given when possible. If the reference covers a larger area, it is indicated as follows: Ozark Highlands, OZ; Arkansas Valley, AV; Ouachita Mountains, OM; Gulf Coastal Plains, CP; and Mississippi Alluvial Plains and Terraces, MI. These areas coincide in a general way with major physiographic, soil and vegetation regions of the state (Figure 1). References applicable to the entire state are indicated by ST.

Since it is possible that some references may have been overlooked, any additions or corrections for inclusion in a possible future revision will be appreciated.

Grateful acknowledgement is made to Dr. Frank Egler.

Norfolk, Connecticut, for encouraging the author to prepare the bibliography, and for providing material containing many helpful suggestions.

List of References

1. Allred, B. W., and H. C. Mitchell. 1955. Major plant types of Arkansas, Louisiana, Oklahoma and Texas and their relation to climate and soils. *Texas Jour. Sci.* 7: 7-19. Brief descriptions of major vegetation communities. Map included. (ST).
2. Arend, John L. 1947. An early eastern red cedar plantation in Arkansas. *Jour. For.* 45: 358-360. Growth and survival of a plantation of red cedar after 44 years. (Independence).
3. ———. 1950. Influence of fire and soil on distribution of eastern red cedar in the Ozarks. *Jour. For.* 48: 129-130. (Sharp)
4. ———, and Odell Julander. 1948. Oak sites in the Arkansas Ozarks. *Arkansas Agricultural Experiment Station Bul.* 484. University of Arkansas. Includes photographs, descriptions of habitats and general characteristics of woody species in each site. (OZ).
5. Armstrong, R., and D. M. Moore. 1957. Botanical aspects of Massard Prairie. *Proc. Ark. Acad. Sci.* 10: 44-57. Ecological notes, map and check list of plants. (Sebastian)
6. Branner, J. C., and F. V. Coville. 1891. A list of plants of Arkansas. Annual Report for 1888. *Arkansas Geological Survey* 4: 155-242. Partially annotated list of 1610 ferns and seed plants. This paper represents the first major compilation toward a flora of the state. (ST)
7. Braun, E. Lucy. 1950. Deciduous forests of eastern North America. The Blakiston Company, Philadelphia. Discussion of forests in Arkansas is included. (ST)
8. Buchholz, J. T. 1930. The Ozark white cedar. *Bot. Gaz.* 90: 326-332. Description of *Juniperus ashei* Buch. and discussion of its habitat and distribution. (OZ)
9. ———, and E. J. Palmer. 1926. Supplement to the catalog of Arkansas plants. *Trans. Acad. Sci. of St. Louis* 25: 91-155. Names of 534 plants added to check list compiled by Branner and Coville (1891). Annotated. List of literature on vegetation of the state to 1925 included. (ST)
10. Bullington, Edwin H. 1961. The vegetation of Devils Den State Park, Washington County, Arkansas. Unpublished Master's Thesis. University of Arkansas. Ecological analysis of native vegetation, lists of species present in different habitats and environmental data.

11. Carr, Lloyd. 1952. New additions to the flora of Arkansas. Abstract. Proc. Ark. Acad. Sci. 5:11. Three species listed from Boston Mountains region. (OZ)

12. Carrothers, Wilson N. 1962. An ecological analysis of woody vegetation on selected sites near the White River, northwest Arkansas. Unpublished research report. National Science Foundation Undergraduate Research Participation Program. University of Arkansas. Ecological analysis of 5 forest types with lists of species and environmental data. (Washington, Benton)

13. Chapman, H. H. 1942. Management of loblolly pine in the pine-hardwood region in Arkansas and in Louisiana west of the Mississippi River. Yale University School of Forestry Bul. 49. Ecological notes on responses of trees to thinning. (CP, MI)

14. Clark, Maxine. 1962. *Trichomanes Boschianum* in Madison County, Arkansas. Amer. Fern. Jour. 52: 85-86. Includes brief description of the habitat and lists associated species present.

15. Coiles, T. S. 1936. The effect of rainfall and temperature on the annual radial growth of pine in the southern United States. Ecol. Monographs 6: 534-562. (Madison, Carroll)

16. Cozzens, Arthur B. 1940. Physical profiles of the Ozark Province. Amer. Midl. Nat. 24: 477-489. Brief discussion of native vegetation and its relationship to physical features. (OZ)

17. Davis, A. M. 1959. Brush control and range development study. Arkansas Farm Research 8: 2. Agricultural Experiment Station. University of Arkansas. Includes a brief discussion of changes in native vegetation after woody species were killed by spraying. (Washington)

18. Demaree, Delzie. 1932. Submerging experiments with *Taxodium*. Ecology 13: 258-262. (MI)

19. _____. 1941. Noteworthy Arkansas plants. Proc. Ark. Acad. Sci. 1: 17-19. List of 50 plants from several counties. (ST)

20. Fogle, Ned, and C. L. Fogle. 1959. The ecological relationship between the occurrence of squirrel leaf-nests in different types of oak forest habitats. Proc. Ark. Acad. Sci. 13: 75-82. A comparison of tree populations in two different areas is included. (Washington)

21. Giles, William L. 1935. The phanerogamic flora of Washington County, Arkansas. Unpublished Master's Thesis. University of Arkansas. Annotated check-list of 437 species. Grasses omitted.

22. Gilmore, Melvin R. 1930. Vegetal remains of the

Ozark bluff-dweller culture. Papers of the Michigan Academy of Science, Arts and Letters 14: 83-102. Discussion and list of plants used by bluff dwellers. (OZ)

23. Grano, Charles X. 1955. Behavior of south Arkansas oaks girdled in different seasons. *Jour. For.* 53: 886-893. (Ashley)

24. Gregson, L. S. 1932. The Gramineae of Arkansas. Unpublished Master's Thesis. University of Arkansas. Keys, description and localities of 235 species in the state. (ST)

25. Guttenberg, Sam. 1954. Growth and mortality in an old field southern pine stand. *Jour. For.* 52: 166-168. Discussion of effects of thinning on stands of pine in Crossett Experimental Forest. (Ashley)

26. Hall, Robert D. 1960. An ecological analysis of woody vegetation near Lake Wedington, Washington County, Arkansas. Unpublished research report. National Science Foundation Undergraduate Research Participation Program. University of Arkansas. Ecological analysis of 3 forest types, with lists of species and environmental data.

27. Hall, William L. 1945. Is pine coming or going in south Arkansas? *Jour. For.* 43: 634-637. Observations on the development of forest stands in the pine-hardwood type of south Arkansas. (CP, MI)

28. Harper, M. Dean, and E. Moye Rutledge. 1959. The influence of exposure on woody vegetation on the Allen soils of the Boston Mountain region of northwest Arkansas. *Proc. Ark. Acad. Sci.* 13: 15-21. Ecological analysis of woody vegetation on two different exposures of Allen soils. (Washington)

29. Henbest, Orrin J. 1941. A preliminary report on the legumes of the Arkansas uplands. *Proc. Ark. Acad. Sci.* 1: 21-23. Brief discussion of taxonomic and economic features of legumes on uplands. List of species included. (OZ)

30. ———. 1950. The lespedezas of northwest Arkansas. *Proc. Ark. Acad. Sci.* 3: 23-30. Includes a discussion and description of lespedezas of the northwest part of the state, and keys to species. (OZ)

31. Hite, Julia M. 1959. The vegetation of Lowe Hollow, Washington County, Arkansas. Unpublished Master's Thesis. University of Arkansas. Ecological analysis of native vegetation, lists of species and environmental data of different habitats.

32. Isely, Duane. 1939. Ecological considerations of certain Arkansas legumes. Unpublished Master's Thesis. University of Arkansas. Discussion of environmental conditions associated with 54 selected species. (Washington)

Arkansas Academy of Science Proceedings

33. Korstain, Clarence F. 1944. Forestry on private lands in the United States. Duke University School of Forestry Bul. 8. One chapter devoted to Arkansas, mainly to southern part of the state. (CP, MI)

34. Logan, Lowell A. 1960. The ligneous flora on contrasting sites at Longpool, Pope County, Arkansas. Proc. Ark. Acad. Sci. 15: 20-28. Includes ecological analysis and list of plants.

35. Lowe, R. 1919. Collecting in Arkansas. Bryologist 22: 14-15. Brief description of area and check list of 31 species present. Not annotated. (Garland)

36. McSwain, E. W. 1946. Compositae of Arkansas. Unpublished Master's Thesis. University of Arkansas. Includes keys to species and an annotated list of published records. (ST)

37. Meade, F. M. 1951. Forest plantations in Arkansas. Agricultural Experiment Station Bul. 512. University of Arkansas. Reports survival of pine and various hardwood plantations after several years. (OZ, CP)

38. _____. 1955. Converting low-grade hardwood stands to conifers in the Arkansas Ozarks. Agricultural Experiment Station Bul. 551. University of Arkansas. Includes much basic information on forests of Ozarks. (Independence)

39. Moyle, J. B., E. L. Nielsen, and O. R. Younge. 1946. Vegetation of artificial lakes in northwestern Arkansas. Rhod. 48: 329. List of 39 species from Lake Wedington, 6 from Lake Atalanta and 8 from Cave Springs. Not annotated. (Washington, Benton)

40. Moore, D. M. 1939. *Delphinium newtonianum*, a new species from the Arkansas Ozarks. Rhod. 41: 193-197 (Newton, Pope)

41. _____. 1940. Arkansas Pteridophyta. Amer. Fern. Jour. 30: 105-119. Discussion of fern collecting in the state. Annotated list of 67 Pteridophytes of Arkansas. (ST)

42. _____. 1940. *Selaginella rupestris* (L.) Spring in Arkansas. Amer. Fern. Jour. 30: 50-53. Discussion of collecting in the state, with description of habitats and localities shown on map. (OZ)

43. _____. 1941. A check-list of ligneous flora of Arkansas. Proc. Ark. Acad. Sci. 1: 41-55. List of 518 native trees, shrubs and vines. Common names and some synonyms given. Not annotated. (ST)

44. _____. 1941. Some noteworthy fern communities of Arkansas. Amer. Fern. Jour. 31: 63-71. List of species present and descriptions of habitats of 5 fern communities. (Garland, Benton, Washington, Pope, Logan)

45. _____. 1941. White-flowered forms of some Arkansas wild flowers. Proc. Ark. Acad. Sci. 1: 25-27. List of 27

plants, with 3 described as new forms. (ST)

46. _____. 1947. Further notes on Arkansas Pteridophytes. Proc. Ark. Acad. Sci. 2: 69-70. Annotated list of 10 species. (ST)

47. _____. 1950. A new fern record for Arkansas. Proc. Ark. Acad. Sci. 3: 33-34. Discussion and description of *Ophioglossum crotalophoroides* subsp. *typicum* in Arkansas. Includes discussion of two other species of *Ophioglossum* and map showing distribution. (ST)

48. _____. 1950. Grassy Lake: A biologist's paradise. Proc. Ark. Acad. Sci. 3: 41-43. Includes brief description of the habitat, ecological notes on the area, and list of 19 principal species present. (Hempstead)

49. _____. 1951. Some new records for the Arkansas flora. Proc. Ark. Acad. Sci. 4: 61-63. Includes annotated list of 35 plants. (ST)

50. _____. 1952. Additional new records for the Arkansas flora. II. Proc. Ark. Acad. Sci. 5: 91-93. Fourteen additions reported, with distribution shown on maps. (ST)

51. _____. 1953. Rediscovery of the bigleaf magnolia in Arkansas. Abstract. Proc. Ark. Acad. Sci. 6: 9. (Clay)

52. _____. 1954. An ecological and botanical survey—Table Rock Reservoir. Editorial Service. University of Arkansas. Includes a brief description of vegetation and habitats in one part of reservoir area in Arkansas. (Carroll)

53. _____. 1955. Observations on *Anemone* in Arkansas. Abstract. Proc. Ark. Acad. Sci. 8: 118. (ST)

54. _____. 1956. *Neviusia Alabemensis* in Arkansas. Rhod. 58: 187-191. Discussion of distribution of this species. Map included. (Faulkner, Conway)

55. _____. 1957. New records for the Arkansas flora. III. Proc. Ark. Acad. Sci. 11: 6-10. Reports records of 26 plants new to the state. (ST)

56. _____. 1958. New records for the Arkansas flora. IV. Proc. Ark. Acad. Sci. 12: 9-16. Reports records of 19 plants new to the state. Includes 9 maps showing distribution. (ST)

57. _____. 1960. Trees of Arkansas. Revised Edition. Arkansas Forestry Commission. Little Rock. Keys, drawings, and descriptions of common trees of the state. Non-technical. (ST)

58. _____. 1961. Revised and annotated catalogue of the Grasses of Arkansas. Proc. Ark. Acad. Sci. 15: 9-25. List includes 323 different grasses. (ST)

59. Moore, Jewel E. 1956. *Hedyotis rosea* in Arkansas. Rhod. 58: 331. (Faulkner)

60. _____. 1958. A study of the vegetation of Petit Jean Mountain in central Arkansas. Unpublished Doctor's The-

sis. University of Tennessee. Ecological analysis of vegetation and check-list of plants. List includes 598 vascular plants, 138 bryophytes, and 106 lichens. (Conway)

61. ———, and Inez Hartsoe. 1955. A new location for *Ophioglossum crotalophoroides* in Arkansas. Proc. Ark. Acad. Sci. 7: 63. (Faulkner)

62. Nielsen, Etlar L. 1937. Grass studies. II. Additions to the flora of Arkansas. Rhod. 39: 423-424. Annotated list of 8 species. (OZ, CP, MI)

63. ———. 1941. Grass studies. IV. Additional species new to Arkansas. Rhod. 43: 219-220. Annotated list of 5 species. (OZ, AV, CP)

64. Olmstead, F. E. 1902. A working plan for the forest lands near Pine Bluff, Arkansas. Bureau of Forestry Bul. 32. U.S.D.A. Washington. Includes descriptions of different types of forests and important species present, and effects of grazing and fire on native vegetation. Well illustrated. (Jefferson)

65. Palmer, E. J. 1923. The Red River forest at Fulton, Arkansas. Jour. Arn. Arb. 4: 8-33. Description of area and annotated list of species. (Hempstead)

66. ———. 1926. The ligneous flora of Hot Springs National Park and vicinity. Jour. Arn. Arb. 7: 104-135. Description of area and annotated list of species. (Garland)

67. ———. 1927. On Nuttall's trail through Arkansas. Jour. Arn. Arb. 8: 24-55. A commentary on Thomas Nuttall's journey through Arkansas in 1819. Includes descriptions of vegetation. (AV, MI)

68. Pyle, H. R. 1939. The herbaceous flora of Magazine Mountain. Unpublished Master's Thesis. University of Arkansas. Annotated list of 437 species, with descriptions of habitats. (Logan)

69. Ray, H. C., and M. L. Lawson. 1955. Site characteristics as a guide to forest grazing use in the Ozarks. Jour. Range Management 8: 69-74. Relation of soil characteristics to site indices of important tree species. (OZ)

70. Read, R. A. 1951. Woodland forage in the Arkansas Ozarks. Jour. Range Management 4: 391-396. Includes a list of common native species found in woodlands. (OZ)

71. ———. 1952. Tree species occurrence as influenced by geology and soil on an Ozark north slope. Ecology 33: 239-246. An ecological analysis of tree species. Includes diagram of geological cross-section, graphs and list of species. (Newton)

72. Reynolds, R. R. 1950. Sidelights on managing mixed pine-hardwood stands under the selection system. Jour. For. 48: 108-111. Describes effects of selective cutting on stands of trees in Crossett Experimental Forest. (Ashley)

Literature on Vegetation of Arkansas

73. Robinson, Albert, Jr. 1959. The flora of Izard County. Proc. Ark. Acad. Sci. 13: 9-14. Includes list of woody plants and discussion of ecological relations of some species. (Izard)

74. Ruby, E. S. 1953. Prairie vegetation in northwest Arkansas. Proc. Ark. Acad. Sci. 6: 31-35. Descriptions of Norwood and Massard prairies. Includes map showing distribution of prairies in Arkansas. (Washington, Sebastian)

75. Schulman, Edmund. 1942. Dendrochronology in pines of Arkansas. Ecology 23: 309-318. Discussion of ring chronologies of shortleaf pine back to 1780. (OM)

76. Scully, F. J. 1937. Ferns of Hot Springs National Park. Amer. Fern Jour. 27: 59-62. Annotated list of 18 ferns. (Garland)

77. _____. 1939. Ferns of Hot Springs National Park and vicinity. Hot Springs Natural History Association Journ. 5: 1-37. List includes 26 species and varieties. (Garland)

78. _____. 1941. The mosses of Hot Springs National Park and vicinity. Bryologist 44: 125-128. Annotated list of 67 species. (Garland)

79. _____. 1942. Grasses of Hot Springs National Park, Arkansas, and vicinity. Rhod. 44: 70-71. Unannotated list of 64 species. (Garland)

80. Sears, P. B., and G. C. Couch. 1932. Microfossils in an Arkansas peat bog and their significance. Ohio Jour. Sci. 32: 63-68. Correlations of microfossils, past and present vegetation, and climatic factors of central Arkansas. (Pulaski)

81. Shantz, H. L., and R. Zon. 1924. Natural Vegetation. Atlas of American Agriculture. Part 1. Section E. U.S.D.A. Includes descriptions of forests of Arkansas. (ST)

82. Shelford, V. E. (Editor) 1926. Naturalist's Guide to the Americas. Williams and Wilkins Company. Baltimore. Includes a brief discussion of physiographic regions, geography, flora, fauna, and natural areas. Section on Arkansas by J. T. Buchholz. (ST)

83. Sternitzke, Herbert S. 1960. Arkansas Forests. Southern Forest Experiment Station Survey Release 84. U.S.D.A. New Orleans. Discussion of forest lands and timber resources in the state. Includes map of major forest types and forest statistics. (ST)

84. Steyermark, Julian A. 1938. Two undescribed plants from Arkansas. Rhod. 40: 71-72. Descriptions of *Echinacea purpurea* (L.) Moench. var. *arkansana* and *Clematis versicolor* Small f. *pubescens*. (Sevier)

85. Stoller, Karl M. 1932. Timber types in the Kiamichi and Ozark regions. Jour. For. 30: 69-71. Brief descriptions of forest types in northwest Arkansas and possible explanation of

their variations and correlations with soil moisture and topographic conditions. (OZ, OM)

86. Turner, Lewis M. 1935. Catastrophes and pure stands of southern shortleaf pine. *Ecology* 16: 213-215. Discussion of effects of tornado, fire, disease and insect infestation on stands of shortleaf pine in southwest Arkansas. (Howard)

87. _____. 1935. Notes on forest types of northwestern Arkansas. *Amer. Midl. Nat.* 16: 417-421. Descriptions of important forest types and their habitats, with lists of species present. A brief discussion of ecological relationships of principal species is included. (OZ)

88. _____. 1935. The status of the shortleaf pine in the northwestern Ozark region. *Trans. Ill. Acad. Sci.* 28: 115-116. Brief discussion of present distribution, habitat, growth, size, success in reproduction, adaptability and relation of shortleaf pine to other vegetation in Ozarks, including north Arkansas. (OZ)

89. _____. 1936. Factors influencing the rate of growth of pine in Arkansas. *Ecology* 17: 227-240. Effects of soil and other site factors on growth of *Pinus taeda* and *P. echinata*. (Ashley, Columbia, Howard)

90. _____. 1936. A comparison of roots of southern shortleaf pine in three soils. *Ecology* 17: 649-658. Relation of root growth to 3 different types of soil. (CP, MI)

91. _____. 1936. Root growth of seedlings of *Pinus echinata* and *Pinus taeda*. *Jour. Agr. Res.* 53: 145-149. Root growth of these species as shown by periodic measurements over a 2 year period. (Washington)

92. _____. 1937. Some soil characteristics influencing the distribution of forest types and rate of growth on trees in Arkansas. *Jour. For.* 35: 5-11. (ST)

93. Van Dover, Byron. 1962. Root habits of broomsedge (*Andropogon virginicus* L.) Unpublished research report. National Science Foundation Undergraduate Research Participation Program. University of Arkansas. Root growth of broomsedge from several sites in Washington County is compared over an eight week period.

94. Wackerman, A. E. 1929. Why prairies in Arkansas and Louisiana? *Jour. For.* 27: 726-734. Discussion of possible reasons for existence of prairies in Arkansas. (ST)

95. Wahlenberg, W. G. 1948. Effect of forest shade and openings on loblolly pine seedlings. *Jour. For.* 46: 832-834. (Ashley)

96. Wherry, Edgar T. 1935. An Ozark variety of *Phlox pilosa*. *Amer. Midl. Nat.* 16: 413-416. Description of *Phlox pilosa* L. var. *Ozarkana* Wherry and discussion of its habitat and distribution. (OZ)

Literature on Vegetation of Arkansas

97. Wittlake, E. B. 1950. Preliminary report on Arkansas bryophytes. Proc. Ark. Acad. Sci. 3: 35-37. Includes a brief history of the study of bryophytes in the state. Several species discussed. (ST)

98. _____. 1950. The bryophytes of Spy Rock Hollow. Proc. Ark. Acad. Sci. 3: 39-40. List of species present and descriptions of habitats. (Franklin)

99. _____. 1951. A new record for *Pelalophyllum lamellatum* (Nees) Lindb. Bryologist 54: 76. Location and habitat given. (Union)

100. _____. 1951. Preliminary report on the Hepaticae of Arkansas. Proc. Ark. Acad. Sci. 4: 65-68. Discussion of collecting in the state, including map of collecting stations. (ST)

101. _____. 1954. The Hepaticae of Arkansas. I. Bryologist 57: 7-18. Discussion of collecting in the state. Includes annotated check-list of 50 species. (ST)

102. Woodson, Robert E., Jr. 1943. A new *Amsonia* from the Ozarks of Arkansas. Rhod. 45: 328-29. Description of *Amsonia Hubrichtii*. (Clark, Garland, Logan, Pike, Yell)



Figure 1. Map of Arkansas showing various regions cited in the bibliography.